

WHAT IS CLAIMED IS:

1. An image forming apparatus comprising:
a first developing agent storing section which stores toner;
5 a toner replenishing member for supplying the toner in said first developing agent storing section to a second developing agent storing section; and
a controller which controls operation of said toner replenishing member on the basis of information
10 about an amount of toner used in said first developing agent storing section and information about fluidity of the toner.
2. The apparatus according to claim 1, wherein the apparatus further comprises a storage section which
15 stores information about toner, said storage section stores information about toner replenishing amount per unit rotation of said toner replenishing member in accordance with the information about the amount of toner used in said first developing agent storing
20 section and information about the fluidity of the toner, and said controller calculates the number of times of operation of said toner replenishing member on the basis of the toner replenishing amount per unit rotation.
- 25 3. The apparatus according to claim 2, wherein said controller calculates a total amount of a developing agent used in said first developing agent storing

section on the basis of the number of times of operation of said toner replenishing member.

4. The apparatus according to claim 3, wherein said controller determines a state of an amount of the toner
5 in said first developing agent storing section by comparing a total amount of toner used in said first developing agent storing section with a predetermined threshold value.

5. The apparatus according to claim 4, further
10 comprising notification unit configured to notify a user of the image forming apparatus of a determination result obtained in said controller.

6. The apparatus according to claim 4, wherein image forming operation of the image forming apparatus is
15 stopped when said controller determines that the total amount of the toner used in said first developing agent storing section reaches the predetermined threshold value.

7. The apparatus according to claim 1, wherein,
20 the apparatus further comprises an environment detecting section which detects an environment in a main body of the apparatus, and

the information about the fluidity of the toner comprises information about the environment in the main
25 body of the apparatus which is detected by the environment detecting section.

8. The apparatus according to claim 1, wherein said

first developing agent storing section and toner replenishing member constitute a toner replenishing container which is integrally formed and detachable from a main body of the image forming apparatus.

5 9. The apparatus according to claim 2, wherein said first developing agent storing section, said toner replenishing member, and said storage section constitute a toner replenishing container which is integrally formed and detachable from a main body of
10 the image forming apparatus.

10. A method of controlling an image forming apparatus comprising a first developing agent storing section which stores toner and a toner replenishing member for supplying the toner in the first developing
15 agent storing section to a second developing agent storing section, comprising:

a use amount determination step of determining an amount of toner used in the developing agent storing section; and

20 an operation control step of controlling operation of the toner replenishing member on the basis of information about the amount of toner used determined in the use amount determination step and information about fluidity of the toner.

25 11. The method according to claim 10, wherein the method further comprises a detection step of detecting an environment in the apparatus, and

the information about the fluidity of the toner comprises information about the environment detected in the detection step.

12. The method according to claim 10, further
5 comprising a toner replenishing amount determination step of determining a toner replenishing amount per unit rotation of the toner replenishing member on the basis of the amount of a developing agent used determined in the developing agent use amount
10 determination step and the information about the fluidity of the toner stored in a storage section.

13. The method according to claim 12, further comprising a number of rotations calculation step of calculating the number of times of operation of the
15 toner replenishing member on the basis of the toner replenishing amount per unit rotation determined in the toner replenishing amount determination step.

14. The method according to claim 13, further comprising a toner total use amount calculation step of
20 calculating a total amount of toner used in the first developing agent storing section on the basis of the number of times of operation of the toner replenishing member calculated in the number of rotations calculation step.

25 15. The method according to claim 14, further comprising a determination step of determining a state of an amount of the toner in the first developing agent

storing section from the total use amount and a predetermined threshold value.

16. The method according to claim 15, further comprising a notification step of notifying a user of
5 the image forming apparatus of a determination result in the determination step.

17. The method according to claim 15, wherein image forming operation of the image forming apparatus is stopped when it is determined in the determination step
10 that the total use amount reaches the predetermined threshold value.

18. A control program for an image forming apparatus, causing a computer to execute a control method for the image forming apparatus which is defined in claim 10.

15 19. A computer-readable information storage medium storing a control program for an image forming apparatus which is defined in claim 10.

20. A developing agent replenishing container which is detachable from an image forming apparatus,
20 comprising:

a developing agent storing section which stores toner;

a toner replenishing member for supplying the toner to a main body of the image forming apparatus;

25 and

a storage section which stores information about the toner,

wherein said storage section comprises a region which stores information for controlling operation of a developing agent replenishing member on the basis of information about an amount of toner used in said
5 developing agent storing section and information about fluidity of the toner.

21. The container according to claim 20, wherein the information for controlling the operation of the developing agent replenishing member comprises
10 information about toner replenishing amount per unit rotation of said toner replenishing member in accordance with the information about the amount of the toner used and information about the fluidity of the toner.

15 22. The container according to claim 20, wherein said storage section further comprises a region which stores the information about the amount of the toner used in said developing agent storing section.

20 23. A memory unit mounted in a developing agent replenishing container for use in an image forming apparatus, wherein

the image forming apparatus comprises a first developing agent storing section which stores a developing agent and a toner replenishing member for
25 supplying toner to a second developing agent storing section, and

the memory unit comprises a region which stores

information for controlling operation of the toner replenishing member on the basis of information about an amount of toner used in the first developing agent storing section and information about fluidity of the
5 toner.

24. The unit according to claim 23, wherein,
the image forming apparatus further comprises an environment detecting section which detects an environment in the image forming apparatus, and
10 the information about the fluidity of the toner comprises information about the environment in the apparatus which is detected by the environment detecting section.

25. The unit according to claim 23, wherein the
15 information for controlling the operation of the toner replenishing member comprises information about toner replenishing amount per unit rotation of the toner replenishing member in accordance with the information about the amount of the toner used and information
20 about the fluidity of the toner.

26. The unit according to claim 23, further comprising a region which stores the information about the amount of the toner used.

27. The unit according to claim 23, further
25 comprising a communication section for communicating with a main body of the image forming apparatus.

28. An image forming apparatus which has a detachable

cartridge comprising a first developing agent storing section which stores toner, a toner replenishing member for supplying the toner in the first developing agent storing section to an image forming section, a storage
5 section which stores conveyability information of the toner, comprising

a controller which controls operation of the toner replenishing member on the basis of the conveyability information stored in said storage
10 section.

29. The apparatus according to claim 28, wherein, the conveyability information includes information about toner replenishing amount per unit rotation of the toner replenishing member in accordance
15 with information about an amount of toner used in the first developing agent storing section and information about fluidity of the toner, and

said controller calculates the number of times of operation of the toner replenishing member on the basis
20 of the toner replenishing amount per unit rotation.

30. The apparatus according to claim 29, wherein said controller calculates a total amount of toner used in the first developing agent storing section on the basis of the number of times of operation of the toner
25 replenishing member.

31. The apparatus according to claim 30, wherein said controller determines a state of an amount of the toner

in the first developing agent storing section by comparing the total amount of toner used in the first developing agent storing section with a predetermined threshold value.

5 32. The apparatus according to claim 29, wherein,
 the apparatus further comprises an environment
 detecting section which detects an environment in a
 main body of the apparatus, and
 the information about the fluidity of the toner
10 comprises information about the environment in the main
 body of the apparatus which is detected by the
 environment detecting section.

 33. A developing agent replenishing container which
 is detachable from an image forming apparatus,
15 comprising:

 a developing agent storing section which stores
 toner;

 a toner replenishing member for supplying the
 toner to a main body of the image forming apparatus;
20 and

 a storage section which stores information about
 the toner,

 wherein said storage section comprises a region
 which stores conveyability information of the toner in
25 said developing agent storing section.

 34. The container according to claim 33, wherein the
 conveyability information of the toner comprises

information about toner replenishing amount per unit rotation of said toner replenishing member in accordance with information about an amount of toner used and information about fluidity of the toner.

5 35. The container according to claim 33, wherein said storage section further comprises a region which stores information about an amount of the toner used in said developing agent storing section.

36. A memory unit mounted in a developing agent
10 replenishing container for use in an image forming apparatus, wherein,

the image forming apparatus comprises a first developing agent storing section which stores a developing agent and a toner replenishing member for
15 supplying toner to an image forming section, and

the memory unit comprises a region which stores conveyability information of toner in the first developing agent storing section.

37. The unit according to claim 33, wherein the
20 conveyability information of the toner comprises information about toner replenishing amount per unit rotation of the toner replenishing member in accordance with information about an amount of toner used in the first developing agent storing section and information
25 about fluidity of the toner.

38. The unit according to claim 37, wherein,
the image forming apparatus further comprises an

environment detecting section which detects an environment in the image forming apparatus, and

the information about the fluidity of the toner comprises information about the environment in the
5 apparatus which is detected by the environment detecting section.

39. The unit according to claim 36, further comprising a region which stores the information about the amount of the toner used.

10 40. The unit according to claim 36, further comprising a communication section for communicating with a main body of the image forming apparatus.